

Lean Production Management System for Electronics Manufacturing



„With FabEagle®Monitoring,
the customer was able to
reduce production time
by eleven percent after
just six months.”

Frank Schubert,
Senior Manager of Business Unit
Manufacturing Automation,
Kontron AIS GmbH



FabEagle®Monitoring

**German manufacturer for energy
measurement technology**

Platform:

FabEagle®Monitoring,
FabEagle®Connect

Project:

Integration of a monitoring tool using
Andon and Gemba boards

Kontron AIS services:

Consulting, configuration, commissioning, support



Challenge

- Existing equipment without an IoT interface in semi-automated production
- One-piece-flow production with different numbers of employees per production area
- Flexible break times and resource allocation across the entire production



Solution

- Acquisition and visualization of process data and deviations per cell, shift and day
- Ongoing identification of quantity trends
- Recording of faults to the nearest second

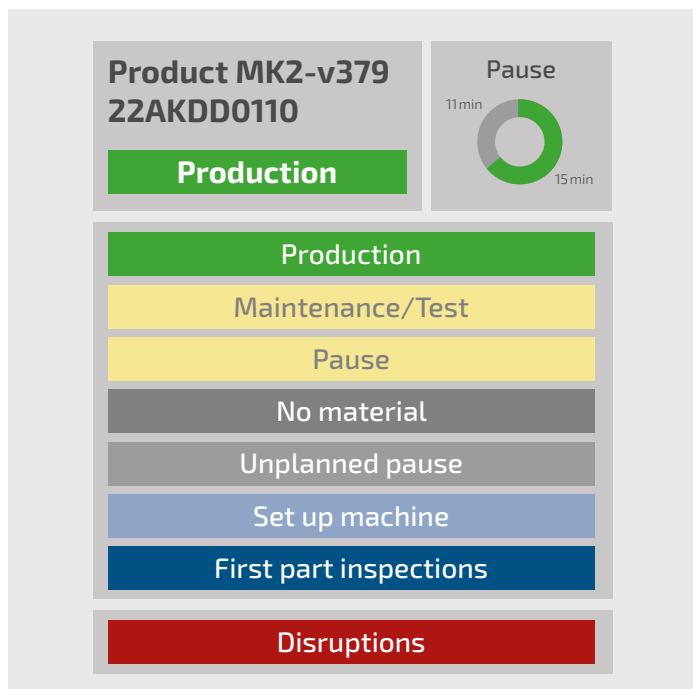


Result

- Automatic recording of product quantities manufactured in cells
- Overview of actual and target values, quantities and trends per shift
- Manual recording of breaks, faults and production interruptions

Creating transparency in manufacturing is the basis for all producers – regardless of industry and on what scale – to continuously improve production and increase efficiency. The information needed is obtained through the effective automatic or manual acquisition of production data.

A renowned manufacturer of energy measurement technology introduced and integrated the central data acquisition and monitoring system FabEagle®Monitoring for exactly this purpose. Andon boards make production progress and process deviations immediately visible for every production cell. By displaying all the relevant production KPIs, the Gemba board also supports the daily Gemba walk and provides an overview of the past three shifts.



Maximum reduction in processing time

Lean production focuses on value creation across all manufacturing processes and strives to avoid wasting resources. The ultimate goal is to reduce processing times as much as possible, measured from receipt of the customer order to receipt of the invoiced amount.

Over the past few years, the manufacturer has consistently introduced lean production management methods and also constantly adapts and optimizes them to current process conditions. A classic analog Gemba board was used to visualize the manually recorded production results of the past three shifts and the to-dos as a result of the latest Gemba walks. However, manual recording of production results, disruptions and interruptions still left too much room for interpretation.

Improving data timeliness and quality

FabEagle®Monitoring was implemented to fundamentally upgrade the identified improvement potential in terms of data timeliness and quality. As part of the project, a web-based BDE terminal was developed for each production cell, which enables workers to promptly record production interruptions and disruptions. In order to rule out errors when changing the product or type, a first-part inspection can also be requested via the terminal. In addition, test and conversion equipment now report the production progress and the quality of the manufactured parts to FabEagle®Monitoring via an easily extendable REST interface.

Visualization using Andon boards

The Andon boards were placed clearly above each production cell and immediately visualize the production progress and any process deviations to the worker and team leader. An electronic production control center was installed in the team leader office, which gives the team leader an up-to-date overview of the entire production and displays events that require the team leader's attention in the form of an aggregated list of faults.



An additional innovation is the electronic Gemba board. The touchscreen monitor in the production hall displays the production results of all production cells from the last three shifts. Using a drill-down function available on the touchscreen, every employee is able to call up and analyze the causes of the production deviations that have occurred.

Sustained increase in efficiency

Following the launch of FabEagle®Monitoring, the manual recording of production results and interruptions was no longer needed. Production-relevant data is now automatically available online. Thanks to the easy configuration of FabEagle®Monitoring, the customer was able to roll out the system to all manual production cells on their own. The resulting transparency and increase in efficiency in many production-relevant areas leads to an immediate increase in delivery reliability and a significant reduction in production times.

6 Months
since launch



11%

Reduction in
production time

About Kontron AIS GmbH

We set the benchmark in industrial software – for more than 30 years and with an experienced team of over 250 employees. Our proven software products and customized digitalization solutions enable machine and equipment builders as well as factory operators to break new ground in automation and secure long-term competitive advantages. Together with our customers we implement worldwide cross-industry, intelligent digitalization strategies and solutions for the smart manufacturing of tomorrow.

As a subsidiary of the Kontron AG, we offer integrated, end-to-end IoT concepts consisting of hardware and software as well as worldwide project management, service, and support thanks to a global network.

For more information please visit: www.kontron-ais.com